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A Curious-Fingered Family. Illustrated.

See page 316.

Rheumatism in Early Life.

See page 314.

HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

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Lie in three words, HEALTH, PEACE, and COMPETENCE."—*Pope.*

EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XII.—No. 306. FRIDAY, FEBRUARY 15, 1889. [PRICE TWOPENCE.

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◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, FEBRUARY* 15, 1889.

CONTENTS OF No. 306.

	PAGE
Notes by the Way: By the Editor.	309
Original Essays:—	
The Weather and Health. First Article. By Dr. Andrew Wilson	310
The Pine Cure	311
Personal Health:—	
Fever and Feverish States	312
Does Exposure to the Sun cause the Human Skull to be harder and thicker?	313
Personal Cleanliness among the Japanese	313
The Family Circle:—	
Rheumatism in Early Life. By Henry Dwight Chapin, M.D.	314
Popular Science Papers:—	
A Curious Fingered Family. By Dr. Verneau	316
The Number Seven	317
Public Health:—	
Scarlet Fever	318
Is Leprosy Infectious?	319
Jottings from the Journals:—	
The Place of Saccharin in Pharmacy—Prevention of Baldness—Infant Mortality	320-21
Our Letter Box:—	
Rules for Correspondents	322
Queries and Answers:—Replies: General, Sanitary, and Medical	322

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

REFERRING to the letter of an Australian barrister on consumptive fellow-travellers, alluded to in HEALTH No. 305, Dr. W. G. Moore writes to the *British Medical Journal* saying that he fully endorses the editorial remark that "we should not wish any individual, for whose health we were in any way responsible, to have to share a small, close, ill-ventilated cabin with a patient in advanced consumption." But consumption, continues Dr. Moore, is not the only malady to which the observation is applicable. It is not agreeable, even if not positively dangerous, for a healthy person to be shut up in a cabin during the long hours of the night with a traveller suffering from chronic diarrhœa or from chronic dysentery. A person with bleeding hæmorrhoids may render a cabin very unpleasant to the other occupant or occupants. If a voyager discovered his companion to be afflicted with some kind of skin disease, the healthy person would hardly spend happy nights. And so on, various other maladies might be mentioned, which, if not actually dangerous, would prove anything but conducive to mental quietude.

THERE is also something, adds this writer, to be said in behalf of sick persons, so often obliged to take passages in ocean-going steamers. Refer for instance to those suffering from chronic diarrhœa or from chronic dysentery, many of whom are obliged to leave the East as the only means of getting rid of their complaints. Rest and quiet are as necessary for the cure of these disorders as when they show in a more acute form. Yet rest and quiet are not obtainable in a crowded ocean-going steamer, or in an ocean steamer's crowded cabin. It is really pitiable to see these patients "sent home," as it is called, for their sufferings on board ship are manifold and continuous, without the separate cabin, the good sick cookery, and the extra skilled attendance, which should be available for invalids on ocean steamers. Numbers of invalid travellers from the East would gladly pay any reasonable sum for such desideratives. As a very general rule the medical officers on board ocean steamers are ready and willing to do all they can to mitigate the sufferings and to meet the desires of invalids on board; but so far as I am aware there are no special arrangements made for the comfort and welfare of the sick on any of the great steamer lines, although probably a week never passes without passengers suffering more or less from maladies contracted in the tropics being landed in Great Britain or in other parts of Europe.

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DR. MOORE'S remark that one great requirement on large steamers is an increased number of single-berth cabins, which should be, in the first instance, allotted to invalids, will be thoroughly in accord with public feeling and good sense. It is advanced, he says, that four and six-berth cabins, of which ship-builders are so fond, come less expensive and occupy less space. But when a large steamer is being constructed, the cost of a few boards more or less is not worthy of consideration; and as regards space, it may perhaps be questioned if single-berth cabins would necessarily take up more room; if so, a little might be lopped off the "gilded saloon," to which several vessels of modern construction have been sacrificed. No doubt it is pleasant sitting in a gilded saloon, or in a gilded music-room, or in an elaborate smoking-room, but when for the construction of these large and special public apartments cabins are placed in insanitary positions, and there is a paucity of single berths, a great mistake is committed, which, if not appreciated when the traveller is well, will certainly be recognized and lamented when he returns, as so many do, an invalid from a tropical climate.

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As stated in your article, 'consumptive patients should be required to have cabins to themselves;" but I go further, and say persons suffering from other diseases should be required to have cabins to themselves, and "some sanitary regulation should be provided which would prevent any other passengers being compelled to share a double cabin." This, with special arrangements for suitable cooking and attendance, would meet a crying want; and there would be, in the knowledge that in case of sickness suitable treatment was available, an additional attraction to those not obliged to voyage. I am glad to give the above able remarks due publicity, for it is only by educating the public up to the proper standard of health-requirements, in this instance, that steamship companies may be compelled to take action to remedy the evils of which complaint is made.

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A VALUABLE contribution has just been made to the subject of Disease in its Geographical Distribution, by the British Medical Association. The conclusions regarding the following diseases, as represented in Britain, will be read with interest: 1. That there is no district in the British Isles in which acute and subacute rheumatism and malignant disease are not common in the sense defined in the inquiry paper. Of varying degrees of prevalence above that point this inquiry was not designed to furnish a criterion. 2. That rickets, though not unknown in rural districts, is mainly a disease of towns and industrial regions, and especially of large industrial towns; that it is rare in the rural districts of Scotland, the North of England, North Wales, and Ireland, Ulster excepted; that it is more common in the rural districts of Ulster and of the rest of England, and exceptionally prevalent in Cornwall, Kent, and North Essex.

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3. That chorea (or St. Vitus' dance), like rickets, is mainly a disease of towns and industrial regions, though by no means unknown in rural districts; that it is fairly evenly distributed in the rural districts of the four countries; that it is rare in seaside watering-places; and that it is, by exception, somewhat rare in the south as well as in the west of London, and not, generally speaking, common in Glasgow, even in the poorer quarters. 4. That the distribution of chorea is further affected by that of acute and subacute rheumatism, its prevalence diminishing as the latter disease becomes rare. 5. That urinary calculus exhibits a decided tendency to affect the eastern sides of the two islands; that its chief seat in South Britain is the county of Norfolk, from which it radiates into the neighbouring counties, and in North Britain the angle of land above Aberdeen, from which it extends down the east coast to the Forth; that it shows a less decided tendency to appear in the coalfields, being especially prevalent in the Black Country; and that its prevalence does not otherwise seem due to geological conditions.

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THE papers on "The Chemistry of the House," by Dr. Drinkwater, will be resumed in a Second Series, the first article of which will be published at an early date. In this second series of papers, Dr. Drinkwater will treat the atmosphere, and allied matters pertaining to domestic hygiene, from the chemical point of view. I have been much gratified to find that these useful articles have evoked a widespread interest among the readers of HEALTH.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE WEATHER AND HEALTH.

BY DR. ANDREW WILSON.

FIRST ARTICLE.

THE familiar expression, "How are you to-day?" addressed to our friends and neighbours, and by them addressed to us, in itself includes considerations which bring the relations of the weather to health very prominently under notice. Tacitly, of course, we all recognize the influence which meteorological conditions exert over our health and spirits. The dull day depresses, as the bright sunshine cheers and invigorates us, while a clear, cold, frosty day is regarded as representing a healthy state of things, when compared with weather of the damp, heavy, and sultry type. There is a popular notion, by no means ill-founded, that the cold, clear weather limits infectious disease by killing off the germs of these ailments. It is doubtless true that living germs do depend largely on conditions of heat and cold for their survival and reproduction; hence, as I have indicated, the connection between a low fever rate and a dry and frosty season may not be a matter which involves grave difficulties in the way of due explanation.

Beyond these popular and mere superficial phases of meteorological conditions and their relationship to health, we find various researches which place the matter of weather and human welfare on a scientific footing. Science has shown us that the shifting periods of day and night are marked by corresponding variations in the life, actions, and vital processes of living beings. Thus our bodily temperature, the amount of carbonic acid given off, and other conditions of life are affected by the daily round of the hours; and still more definite is the effect of seasonal changes and weather variations on the animal organism. A glance at lower life shows us how much heat and cold mean and imply to animals at large, and on man the effect of weather conditions is equally marked.

Probably one of the most important of researches into the effect of seasonal variations on man's health was that undertaken by Mr. Milner, when Medical Superintendent of the Convict Prison at Wakefield. Life in a prison, as every one knows, is regulated as nearly as living items can be, by rules of almost mathematical regularity. Food, air, water, work, exercise, and all other conditions of existence are allowed for according to a given scale. The prisoner's diet is made to bear a scientific relation to his work, and his life, thus rigidly supervised, both as to its personal details and surroundings, represents probably the nearest approach our century, or, indeed, any century, has seen to the ideal physical existence. It may seem strange to speak of a prison existence as the ideal of the life physical; but that it is so, from a health point of view, admits of no doubt. All details regarding sanitation, infectious disease, food, cleanliness, ventilation, and so forth, are duly supervised in the jail. Therefore, it is clear that if we, outside the prison, as a nation, could succeed in regulating our existence as healthily as the prisoner's life is regulated for him, our death-rate would become reduced to a bare minimum, infectious diseases would practically have disappeared, and, save for inherited disease, old age would become a satisfactory reality of our times.

Now, prison-life has always afforded to medical men very apt opportunities for the study of diet and other questions as related to human health. We calculate a man's food in prison, and we know the amount of work he does, and we can therefore strike a balance between vital income and expenditure with some fair promise of arriving at correct results in the way of knowledge about the nutrition of the frame. So also the careful supervision of a number of men for several months or years may be expected to yield results of valuable kind in relation to the natural nourishment of the body.

In Mr. Milner's researches he had under observation men between the ages of fifteen and sixty. These were healthy prisoners, and they all lived, it need hardly be said, under similar conditions. Their food, exercise, supply of air, living-room, and like items, were as nearly as possible alike, the mean temperature of the air amid which they lived being 61 degs. Fahr. Between 1st January, 1848, and 31st December, 1857, Mr. Milner had his subjects under close observation. Needless to say, the question of weight was one of the principal items connected with Mr. Milner's researches. On being received into the prison the men were weighed, and their weight was also taken at the end of every month. The number weighed amounted to over 4,000. The average monthly weighings were 372, while no fewer than 44,004 individual weights were ascertained as a grand total.

Mr. Milner's results were of very striking character. For January, February, and March of each year the bodies of his prisoners underwent a loss and diminution in weight. His figures indicating the loss were, for January, 0·14; for February, 0·24; and for March, 0·95. When March arrived, and had passed, it seemed that the scale of bodily nutrition began to veer towards equilibrium. From April to August there was illustrated gain and increase, in place of diminution and loss. The figures for gain were, for April, 0·03; May, 0·01; June, 0·52; July, 0·08; and August, 0·70. Then, after August, the scale seemed to turn once again towards loss,—November alone showing an exception. September gave as a loss 0·21; October, 0·10; and December, 0·03.

If, therefore, one could conceive of a man passing his existence in a finely-graduated pair of scales, we see that his side of the scales would rise in April and fall in September, with a possible rise or stability in November, as above indicated. Again, we notice that these changes from loss to increase are somewhat abrupt in nature, as also are those leading from gain to diminution in weight. Clearly these facts must be held to express some natural law of body, which shows us that in the summer, or warmer months of the year, with more genial surroundings,—probably leading to less need for the urgent stoking of the bodily fire,—the organism gains in weight and vitality. This law, again, it may not be rash to suppose, may depend upon those wide natural conditions connected with the seasonal variations under which higher and lower life alike exist.

Turning now to questions more immediately connected with the weather and health, we find many interesting facts, from which we may deduce general conclusions of a nature serviceable to the cause of hygiene and our physical welfare. For example, three rules have been formulated regarding weather and health, and have been recognized as of wide and general application. Thus, first of all, a very dry air, with a high temperature, seems to favour the development of fevers and intestinal complaints. Secondly, a very moist air, with a low temperature, is associated with bronchial and rheumatic troubles; while, thirdly, a very dry air, with a low temperature, favours inflammation of the breathing organs.

Sir Arthur Mitchell, Mr. A. Buchan, and Dr. B. W. Richardson have undertaken a number of important researches into the question of the relations between the weather and certain diseases of well-marked type. Dr. Richardson analysed the diseases causing 139,318 deaths between the years 1838 and 1853. As regards *bronchitis*, a common disease, he found that the deaths from this disorder attain their maximum during January, February, and March; in April, May, and June the deaths decline; in July, August, and September they reach their lowest ebb, and in October, November, and December the deaths begin to rise. The proportions are, for January, February, and March, 36·793; for April, May, and June, 20·301; for July, August, and September, 10·327; and for the last quarter of the year, 32·570. Sir A. Mitchell and Mr. Buchan practically arrive at the same conclusion. The months from April to September show a fall in their researches, while from October to December there is a distinct and gradual rise; in January a decided rise, and a fall of fairly gradual nature from February to April.

Pneumonia, or "inflammation of the lungs," again, according to Dr. Richardson, shows its highest death-rate in the first three months of the year; its first decline in April, May, and June; its minimum in July, August, and September; and an ascent, or rise, in the last quarter of the year. The percentages of deaths from this disease were, for the first quarter, 37·022; for the second, 19·631; for the third, 12·234; and, for the last, 33·521. Here, as in the case of bronchitis, we can trace the effects of lowered nutrition (a natural phase of life, as shown by Mr. Milner) and of the increased cold.

Influenza gives us, curiously enough, the biggest mortality in the last quarter of the year, instead of in the first quarter. The figures here are, for the first quarter, 23·539; second, 12·71; third, 4·502; and fourth quarter, 59·784. *Croup* yields a heavy mortality both in the first quarter (27·523) and last quarter (27·456) of the year; its second quarter being given at 25·100, and its third at 19·919.

The figures of Dr. Richardson with reference to the death-rate from scarlet-fever, erysipelas, and carbuncle are also instructive. They are given as follows:—

	First Quarter.	Second Quarter.	Third Quarter.	Fourth Quarter.
Scarlet Fever ...	20·809	18·978	26·234	33·976
Erysipelas ...	25·144	23·444	22·337	29·174
Carbuncle ...	29·771	19·685	24·409	29·133

To this interesting topic, however, I shall return in a second paper.

(To be concluded.)

THE PINE CURE.

Sufferers from rheumatism, gout, bronchial and chest affections, will hear with lively interest of the establishment in its integrity, in this country, of the system of treatment adopted at the Continental spas. To a large proportion of sufferers, the French and German watering-places are simply impracticable, owing to the cost of travel and of residence. Moreover, the sufferings of a great number of the victims in this country render it impossible for them to undertake the ordeal of torments implied in long railway journeys on both sides of the water, with, in all probability, a boisterous steamboat passage between. The obligation of a journey of this sort is no longer a condition of cure, or, at least, of remedial experiment.

At Farnborough, in Hampshire, within a mile or two of Aldershot, within earshot of the performances of the regimental bands of the regiments located in the North

Camp, and, best of all, within an hour's run of Waterloo and Charing Cross stations, the charming and delightfully-situated house, famous the wide world over wherever our red-jackets have carried the English language as the Queen's Hotel, has been transformed into a Therapeutic Establishment for the administration, purely and simply, of the pine-treatment, as it is to be found abroad. But all the principal features of the hotel remain,—all the conveniences of a liberal and hospitably-administered house, —an abundant and elegant *table d'hôte;* billiard tables, at which the inmates play without charge; charmingly-furnished drawing and other rooms; spacious and most comfortable bedrooms of easy access, as may be imagined when it is stated that the building is but one storey high, finding its space, like the bungalow, in area instead of staircases.

To this charming retreat there have been added suites of baths, wholly constructed on the Continental models. They comprise Russian, Turkish, well, pine, needle, douche, electric, shower, and other baths, along with a spacious inhalation-room, in which patients sit and breathe, for a prescribed period, an atmosphere of vapour charged with the delicate fragrance of the spray of the essence of pine obtained from trees which flourish only on the Alps above the snow-line. This vapour, similarly charged, is respired in the Russian bath, where it not only penetrates the system by means of inhalation, but is absorbed into the blood through the pores of the skin. There is certainly no drug more immediately decisive in its influence upon cases of chronic rheumatism, gout, and bronchitis than Stern's Pumiline or Essence of Pine, as used in the Continental spas and at Farnborough. The institution has been opened, comparatively speaking, but a few months; but already, having regard, of course, to the period of its existence, it defies any other establishment, whether abroad or at home, to beat its existing record of cures.

The system, as it is to be met with on the Continent, is perfected at Farnborough by the employment of a staff of persons skilled in the art of massage, together with experienced shampooers and female bath-attendants of high qualifications. The whole course is one of the most grateful to the invalid that can be imagined. The Russian bath is exquisitely soothing. The pine bath has an almost electrical effect in its influence upon the circulation of the blood. In the inhalation-room, the patient grows instantly sensible of relief from the distress of breathing.

The atmosphere, moreover, is everywhere charged with the delicate aroma of the pine. It is not too much to say that such an institution as this deserves special notice as an heroic effort to furnish to all sufferers from gout and rheumatism especially, in this country, the opportunity for cure or relief which, until the establishment of the institution at Farnborough, was to be obtained only at cost of a long and fatiguing journey and heavy demands upon the purse.

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A Lecture to Young Men on Purity of Life and the Preservation of Health, by A Graduate. Price One Shilling, or post-free, 1s. 1d., from Henry Renshaw, Medical Publisher, 356, Strand, London, W.C.

A complete refutation of quackery of all kinds, and a safe and reliable guide, from the medical standpoint, to all young men. Every youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense. Full directions for the treatment of Nervous Debility so-called, and allied ailments, are also given. Thousands of sufferers have welcomed this pamphlet as a veritable beacon-light to health and purity of life.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

FEVER AND FEVERISH STATES.

No feverish state is to be considered as beneath notice. Consumption first begins with a shade of increase in temperature, and the slightest lesion working harm to the body increases the body-heat. In children, the temperature darts up on slightest provocation, and it is wise for every mother with young children to have a clinical thermometer in the house.

In times past probably the greatest enemy of man were the malarial fevers. Wherever there is decomposing vegetable matter,—and where is there not this in great forests?—there malaria abounds. Close at hand in many parts where fevers flourished grew a tree the bark of which, if infused, could dispel the malarious disease. Not, however, it is believed, till about the middle of the seventeenth century was the civilized world cognizant of its virtues. Humboldt, in his *Memoirs* on the cinchona forests, states that the cinchona is unknown as a remedy to the Indians where it grows, and that these people adhere to the habits of their ancestors. "They have generally the most violent prejudices against it, considering it poisonous; and in the treatment of fever prefer the milder indigenous remedies." Markham and Spence confirm Humboldt's statements, the former remarking that the native Indian doctors do not use the bark, and that the Cascarilleros of Ecuador believe that their red bark is used solely for dyeing. The *U. S. Dispensatory* says, "It is uncertain whether the Jesuit fathers received their knowledge from the Indians or, as Humboldt believes, discovered the virtues of the drug for themselves, having been led to make trial of it by its extreme bitterness."

The Countess of Cinchon, wife of the Viceroy of Peru, having in her own person experienced the beneficial effects of the bark, is said, on her return to Spain in the year 1640, to have first introduced the remedy into Europe. After its introduction, it was distributed and sold by the Jesuits, who are said to have obtained for it the price of its weight in silver. From this circumstance it was called *Jesuit's Powder*. According to Sturm, "twenty doses in 1658 cost sixty florins." It seems first to have been advertised in England in this same year, but encountered so much incredulity and prejudice that nineteen years elapsed before it was made officinal in the London Pharmacopœia. It was with this famous remedy that Sir Robert Talbot (as a "secret nostrum") cured Charles II. of malarial fever. He sold his secret later on to Louis XIV. of France, who magnanimously gave it to the world in 1681.

From the crude doses given these kings, to the improved forms in which the active principles of the cinchona can be administered now is a gigantic stride. To be sure, every one knows quinine, but every one does not know that it is insoluble, except in very large quantities of water. If a little acid be added to the water, the quinine will dissolve; but it will then be most bitter, and, if taken in pills, may not be all absorbed, as the acid of the stomach is often absent in fever. Without doubt, much of the quinine that has been administered was not absorbed because insoluble. This insolubility renders ordinary quinine a most expensive drug, because it may not all be taken up by the system. The Soluble Quinine Tabloids are most economical and efficacious, as each grain of the drug dissolves as quickly as it comes into contact with ten drops of water.

DOES EXPOSURE TO THE SUN CAUSE THE HUMAN SKULL TO BE HARDER AND THICKER?

One of the most interesting things mentioned by Professor Virchow in his little book just published, entitled *Medical Remembrances of an Egyptian Journey*, in which he describes an excursion up the Nile as far as the first cataract, is that the broken skulls on the first great sepulchral fields, dating from Roman times, are as thick and hard as Herodotus says those of the slain Egyptians were in comparison with the brittle ones of the Persians. The Greek historian explains this by attributing it to the early exposure of children to the heat of the sun; and in many parts of upper Egypt, the German travellers actually found young children thus exposed during their parents' absence in the fields, in immense clay bowls, resembling in shape a champagne-glass with a stem, into which they were put without shelter.

This discovery by Professor Virchow is interesting, because it at once suggests the question whether the proverbial thickness of the skull of the negro has not been caused by exposure to the sun, and whether it is a peculiarity of savages of tropical countries that their skulls are thicker and harder than those of the inhabitants of temperate and colder countries.

Students of craniology have never made any investigation to ascertain whether the skulls of different races vary in degrees of hardness. It would be almost impossible to make such an inquiry. As is well known, the human skull increases in hardness from childhood to maturity and age. A miscellaneous collection of skulls of any given people would, therefore, be of no value in such an investigation. To obtain a collection of skulls of a number of nationalities, that should be taken from subjects all of the same age; to have them all similarly prepared, and in sufficient numbers to make it possible to draw any general conclusions from their comparison with each other, would be manifestly impossible.

More attention has been given to the relative thickness of different skulls, or rather to their weight, from which their thickness may be inferred. Of the large collection of crania in the Army Medical Museum at Washington, the thickest are those of negroes and Alaskan Indians. The skulls of other Indians, both of North and South America, in tropical or temperate climes, and of the Eskimo, do not appear to be particularly thick. Among the ancient Peruvian skulls recently received by the Museum, and the ancient crania collected in Arizona last summer, there are frequent individual variations in thickness, but no tendency to unusual thickness. The conclusion from these facts is that exposure to the sun probably does not cause thickness of the human skull.

In connection with this subject it is interesting to note that among the Australians the *sinus frontalis* (or hollow space between the two layers of the skull in front) is generally found to be solid in the males, instead of being hollow, as in the skulls of other races. The sinus in the male Australians generally extends straight across the head, the lower side overhanging the eyes, so that they seem to look out from under it; while, in the North American Indians, a modification of shape deprives them of that heavy look about the forehead. The heavy frontal sinus of the Australians, of course, increases the weight of the skull.

CHEMICAL ANALYSIS.—Dr. Drinkwater, Lecturer on Chemistry in the Edinburgh Medical School, undertakes the Analysis of Water, Foods, Wall-Papers, and of all other products and articles connected with Household Health and Commercial Interests. Terms on application to Dr. Drinkwater, Chemical Laboratory, 41, Chambers-street, Edinburgh.

PERSONAL CLEANLINESS AMONG THE JAPANESE.

The following interesting account of the personal habits of the Japanese, says *Public Health*, is taken from *Die Korperlichen Eigenschaf ten der Japaner*, an anthropological study, by Dr. Edwin Baelz:—

"The Japanese are great admirers of a white skin, hence they envy the skin of the European. But if the skin of the European must be accepted with his blue eyes and light hair, they then would prefer their own yellow tint. The women whiten artificially their neck and face; but at the present day this custom is confined to the female sex.

"The attention paid to the skin by the Japanese exceeds that of any nation in the world. This is seen especially in the national custom of the hot bath (oyu)."

Dr. Baelz, on the ground of numerous experiments and daily experience, denies that hot baths enervate or render a person more sensitive to cold. None of the European physicians who so strongly object to the oyu of the Japanese, with its 45 degs. C., have taken the trouble to properly investigate the matter. There was, indeed, a time when the heat of the water at the public baths was ordered to be kept below blood heat, happily without being obeyed, for such baths are destitute of the advantages of the hot bath. What the European would call hot is not hot to the Japanese. The Japanese daily takes his hot bath, and that they are not enervated by this habit every one knows who see them run barefooted, and with naked legs, in the snow.

"In Tokio the baths are hottest, 49 degs.; in other places their warmth is 43 degs. A Japanese stays in the bath from one to five minutes; he then gets out, washes himself, and returns for a moment to the bath. This short time suffices to raise the temperature of the blood to 39 or 40 degs. After the bath the skin is reddened, a pleasant perspiration ensues, and, at the latest, in three-quarters of an hour the ordinary temperature is again attained.

"Europeans often cast doubt on the personal cleanliness of the Japanese, because the lower orders, for months together in the winter, do not change their clothes; but this is common among the lower orders of all countries of Europe, myriads of whom, besides seldom changing their clothes, never bathe from one year's end to the other. The Japanese clothing does not fit so close to the body as that of the European. The neck, breast, arms, and legs are exposed to the air; it touches the skin only at the waist, where it is bound by a girdle,—hence there is greater freedom for transpiration through the skin. It is, besides, an accepted truth that if only one of the two can be cleansed, it is better to wash our bodies than our clothes. In Japan, unless a person has daily his hot bath, he is considered unclean and vulgar. The bath is so essentially national in Japan, that if the traveller goes to the most remote out-of-the-way places in the interior, the bath is one of the first things prepared for him. If time does not allow of a complete bath, in summer, at least a foot-bath is brought. Another sign of Japanese respect for cleanliness is that before every retiring place stands a vessel with a towel, ready for use. The Japanese consider the absence of this convenience among Europeans as uncleanliness scarcely conceivable."

Yet an observation on "hardening" of the skin. The Japanese can expose his clean-shaved cranium to the summer sun, under conditions in which a European with a thick head of hair and a hat would fear sunstroke. The Japanese in winter go with bare feet and naked legs in rain or snow without suffering from cold. The work-

men, especially the kurumaya,* can stand without injury among snow with naked legs for hours at a time, when a brisk, cold wind is blowing. The same men draw in summer, in a heat of 30 degs. in the shade, a heavy man of 70 kilos in weight along the sunny road, in an unbroken course of 25 or more kilometres, and the first thing they do when they arrive at the resting-place is to go to the spring and douche their streaming bodies with cold water. This is what is called "hardening," from which the European can learn something,—viz., that endurance of a high order can be acquired without special training, if only commenced early enough.

Insect-Powder Plants (*Pyrethrum cinerariæfolium*, *P. roseum* and *P. carneum*) have found a congenial climate in South Australia, and, without having the slightest care bestowed upon them, have done uncommonly well in all the different situations and soils in which they have been planted.

A Remarkable Case.—She came from Detroit, Michigan, and her great pride was being an invalid. She lost no opportunity in stating that she came to Minnesota to recuperate. She did not hesitate to enter into a conversation with any person she came in contact with, giving advice, climatological or physiological, to invalids, and seeking the same from those of robust constitution. Her conversation was always prefaced by the introductory inquiry, so common to visitors, "Did you come here for your health?" She thus addressed a stalwart, ruddy visaged young man at the dinner table of the "Metropolitan" a few days since, and the following dialogue ensued:—"Yes, madam; I came here probably the weakest person you ever saw. I had no use of my limbs,—in fact, my bones were little tougher than cartilages. I had no intelligent control of a single muscle, nor the use of a single faculty." "Great heavens," exclaimed the astonished auditor, "and you lived?" "I did, madam, although I was devoid of sight, was absolutely toothless, unable to articulate a single word, and dependent upon others for everything, being completely deprived of all power to help myself. I commenced to gain immediately upon my arrival, and have scarcely experienced a sick day since; hence I can conscientiously recommend the climate." "A wonderful cure!" said the lady, "but do you think your lungs were affected?" "They were probably sound, but possessed of so little vitality that but for the most careful nursing they must have ceased their functions." "I hope you found kind friends, sir?" "Indeed I did, madam; it is to them and the pure air of Minnesota that I owe my life. My father's family were with me, but unfortunately my mother was prostrated with a severe illness during the time of my great prostration." "How sad! Pray, what was your diet and treatment?" "My diet was the simplest possible, consisting only of milk, that being the only food my system would bear. As for treatment, I depended entirely upon the life-giving properties of Minnesota air, and took no medicine except an occasional light narcotic when very restless. My improvement dated from my arrival. My limbs soon became strong, my sight and voice came to me slowly, and a full set of teeth, regular and firm, appeared." "Remarkable,—miraculous! Surely, sir, you must have been greatly reduced in flesh?" "Madam, I weighed but nine pounds. I was born in Minnesota. Good-day."

* The kurumaya are men who draw a small light two-wheeled sort of gig.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

RHEUMATISM IN EARLY LIFE.

By Henry Dwight Chapin, M.D.

(Concluded.)

Tendency to Recur—One attack of rheumatism makes another possible, if not probable. This tendency to repetition must be very carefully watched. In many cases it is impossible to get an accurate history of the number of seizures, as parents sometimes say that for one or two years complaint has been made of pains every few weeks. Some children who are badly affected seem so saturated with rheumatism as to be complaining of pain more or less all the time.

Certain affections bear such a close relationship to rheumatism in children as to require mention in connection with a study of this disease.

St. Vitus' Dance.—This peculiar, irregular jerking of some or all the muscles of the body is very apt to ensue after several attacks of rheumatism. Although it has an alarming appearance to the mother and friends, it is very rarely a serious affection as regards life. It is usually, however, tedious in duration. Under proper treatment, most cases will yield in from six weeks to three months. In some instances it will alternate with rheumatism, one affection following the other during the course of several years. The first symptom is often a twitching of the muscles of the face, giving the appearance of the child's making faces. Thickness of speech may follow from a spasmodic action of the tongue. Perhaps the first symptom may be a partial loss of power in a hand and an arm, which precedes the twitching. Not infrequently children are punished for dropping plates or other objects from supposed carelessness, whereas it is really the beginning of this disease. Many such cases have come under my observation. The twitching may be confined exclusively to one side of the body, face, arm, and leg. Children who are suffering from this disease should be kept as quiet as possible, apart from other children who will stare at them and probably make remarks. The more the twitching is noticed the worse it becomes. The movements are not under control of the will, and hence cannot be stopped. One peculiar feature is that they cease during sleep. The connection between rheumatism and St. Vitus' Dance is a close one, although its true nature is not understood. Probably the same irritation and disturbance of the system may be the cause of both kinds of attack.

Tonsilitis, or Sore Throat.—There is a growing belief among those who see much of certain forms of rheumatism that frequent attacks of inflammation of the tonsils have some relation to the former disease. Sore throat has been present before, at the time, or immediately after an attack of rheumatism in a sufficient number of cases that have come under my observation to suggest the possibility of some connection besides a mere coincidence. As an example, a boy nine years of age came to my office with a severe attack of tonsilitis. He was sent home, and went to bed. In three days I was sent for, and found acute rheumatism, beginning in the knees and back of the neck. It is worth while, in children who are liable to repeated attacks of sore throat, to examine carefully for any evidences of rheumatic taint.

Anæmia.—This term, which stands for thin, watery

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A BOSTON barber declares on his business-card that he is "a first-class tonsorial artist, facial operator, cranium manipulator, and slayer of contiguments." And yet he modestly refrains from calling himself a professor.

ADVICE TO SUCKLING WOMEN.—In the *Petit Journal de la Santé*, Dr. Sully gives the following advice to suckling women: Abundance of substantial food, which should be easily digested. This food should contain a considerable quantity of albumen, also of salts of lime, of soda, and of potash. On this account, lentils deserve the preference. After having tried alcohol in all its forms, the author concluded that every variety of alcoholic drink is injurious as much to the mother as to the child. It is true that the absorption of a glass of beer or porter increases the afflux of milk to the breasts; but this milk is watery, poor in nutritive principles, and not at all comparable to that which is produced by the digestion of substantial nourishment.

Correspondence.

THE following are a few letters (selected from thousands) which have recently been received by Mr. C. B. HARNESS, of 52, Oxford-street, London, W., showing the really marvellous cures effected by simply wearing his celebrated Electropathic Battery Belt :—

MR. R. G. BARKER, 6, Douglas-terrace, Bothwell-street, Hamilton, N.B., January 17th, 1889, writes :—

Dear Sir,—About the end of October last I obtained for my wife one of your Electropathic Belts for indigestion, with which she had been suffering severely for years—indeed, at the period above named she seemed to be fast succumbing to its direful symptoms. I am now pleased to tell you that after wearing the Belt daily for the past three months she is quite a different woman, and is quite free of the distressing malady."

G. W. BACON, ESQ., F.R.G.S., 127, Strand, London, October 20th, 1888, writes :—

"To Mr. C. B. Harness. Dear Sir,—I write to express my gratitude for the great good I have derived from your system of electro-massage. My case, as you may remember, was an obstinate one, and I only regret that I did not take the advice of my family doctor and resort to electrical treatment at an earlier stage. I am pleased to state that all dilation of the veins has now disappeared, the swelling of the leg being reduced, and the cure seems permanent and complete. In all my travels I have never seen an establishment so completely fitted up for these methods of treatment. I wish you every success."

MRS. OSBORNE, The Hollies, Newark-upon-Trent, September 27th, 1888, writes :—

"Your Electropathic Abdominal Belt has had a wonderful effect upon the circulation and in improving the general vitality of the system. Since wearing the Belt I have become quite strong, and can walk miles without fatigue. I am, in fact, completely cured by your treatment."

MRS. CONWAY, 29, Archway-street, Barnes, Surrey, writes :—

"I have been a constant sufferer from sciatica for the past ten years, and my cure seems a marvel."

MR. WILLIAM WHITTINGHAM, Chiswick Cottage, Surbiton Hill, writes :—

"It gives me immeasurable pleasure to be able to testify to the benefit I derived from wearing an Electropathic Belt advised by you. Its influence has been marvellous in producing that refreshing sleep I have been a stranger to so long, and I now rise in the morning perfectly braced up for my day's duties, which makes me deeply grateful at my advanced age of fifty-eight."

MR. JAMES CUMMING, 29, Crossley-street, Liverpool-road, N., writes :—

"I feel very much happier, and in a better frame of mind, since wearing the Electropathic Belt and Suspender. My health has improved considerably. I no longer shun my friends, I enjoy society, and can only attribute my recovery from the wretched condition I was in to your Electropathic treatment, which it will be my duty to recommend to any sufferer I meet."

DR. CHARLES LEMPRIERE, D.C.L., Senior Fellow, St. John's College, Oxford, writes :—

"I beg to testify that the Belt you sent to my order has completely answered, not only as the best curative, but I dare to think preventive. I contracted some years ago, in Syria, periosteal rheumatism, which renders me peculiarly sensitive of atmospheric change. I can, therefore speak positively on the advantages the Belt affords; nor is my experience singular, as I constantly receive testimony from others similarly affected."

MR. W. J. MAY, "The Albion," Waterloo-road, Aldershot, writes :—

"October 11th, 1887.—I have received a letter from my brother in India to say that he received the Electropathic Belt safely, and that he had derived very great benefit from its use. He wished me to inform you that he suffered from indigestion and spinal weakness, but is quite well now. My brother's address is Quartermaster-Sergeant Louis Silver, 2nd Batt. 22nd Cheshire Regt., Depot, Umballa, India, but he is under a fresh order for service in Burmah."

MAJOR PAKENHAM, Longstone House, Armagh, writes :—

"I am very happy to inform you that the Electropathic Belt which you supplied me with has completely cured me of the rheumatic gout, from which I had suffered such intense agony for nearly two years, and I now feel as strong and active as I have ever felt in my life. Several of my friends have, on my recommendation, tried these Belts, and in every case the result has been most satisfactory."

MR. H. FINCHAM, 54, Lugard-road, Peckham, S.E., writes :—

"Before I came under your treatment, I was a great sufferer, with intense agony, from indigestion and kidney disorder, and had been to many doctors, but could get no relief. Before wearing your Electropathic Belt, I must say I had very little faith in it; but I am now completely cured. I made your Electropathic Appliances known at Bognor, where I went for a change of air, and I gave your address to a lady who was suffering from indigestion, at the same time telling her that no one could have been such a martyr to it as I was."

MR. G. NEAL, 9, Eaton-lane, Buckingham Palace-road, London, writes :—

"Twelve months ago I was a private in the Royal Artillery, and through an accident, in which my spine was injured, and resulting in both legs being paralysed, I was unable to walk for nine months, during which time I was treated in a military hospital, and was eventually discharged from the service as incurable. Shortly afterwards I was persuaded to try one of your Electropathic Belts, which I did, and now, after three months' wear, am able to walk, and am getting on rapidly towards recovery."

MR. GEORGE GARWOOD, 208, Caledonian-road, King's-cross, N., writes :—

"My health has been very good ever since wearing Harness' Electropathic Belt, but before wearing it I was never free from pain. I cannot speak too highly of your Electropathic Appliance; it has made me feel quite a different man. I shall always recommend it."

MEN and WOMEN who wear Harness' world-famed Electropathic Belt find that it invigorates the debilitated constitution, stimulates the organic action, promotes the circulation, assists digestion, and promptly renews that vital energy the loss of which is the first symptom of decay. Its healing properties are multifarious; it stimulates the functions of various organs, increases their secretions, gives tone to the muscles and nerves, relaxes morbid contractions, improves nutrition, and renews exhausted nerve force. Acting directly on the system, it sustains and assists its various functions, and thus promotes the health and vigour of the entire frame.

MR. C. B. HARNESS gives advice free of charge, personally or by letter, on all matters relating to health and the application of Curative Electricity, Massage, and Swedish Mechanical Exercises. If you cannot call, write for descriptive pamphlet and private advice form. Note only address, and call, if possible, at the Institute of the Medical Battery Company, Limited, 52, Oxford-street, London, W. (corner of Rathbone-place). All communications treated as strictly private and confidential.

blood, may be used in connection with many depraved conditions of health in childhood. Rheumatic children, however, are particularly liable to such a state of blood. They are pale and languid, and complain much of headache. On everting the lip or eyelid the mucous membrane presents a white or washed-out appearance instead of a natural red colour. Such children are very nervous, and have frequent attacks of night terrors. If this condition is not remedied they soon become thin and badly nourished. Among many other affections sometimes found in the trail of rheumatism may be mentioned pleurisy and various rashes, particularly an obstinate form of hives or nettle-rash.

Hereditary Tendency.—While the exact nature and conditions of hereditary influences are not known, it appears to be an undoubted fact that some state of the system is transmitted from parents to children that will favour the development of rheumatism upon the presence of an exciting cause. The child of rheumatic parents on slight exposure may develop rheumatism from a state of the system favourable to the complaint, but may escape if the exciting cause be absent. The practical deduction from such a consideration is that when parents are rheumatic, extra care should be taken in the raising of children to prevent an onset of the affection. A very peculiar fact about rheumatism in early life is that it attacks girls more frequently than boys. It is not easy to explain this preference, as one would suppose that boys, being more exposed, would suffer more frequently than girls. Out of seventy-six cases that I have carefully studied, fifty were girls and only twenty-six boys. It will be well to keep this fact in mind.

Treatment.—Rheumatism is accompanied by an over-acid saturtion of the system, the most plausible theory being that it is due to lactic acid. This acid may collect in the system in two ways: first, by fermentation of the food in the digestive canal, one of the principal products of such fermentation being lactic acid; second, by a faulty action of the skin, which is the source of elimination of many impurities. In treating this affection special attention must thus be directed to the digestive tract and the skin. A rheumatic attack may be preceded for some time by evidences of indigestion and malassimilation. To remedy this, simple and easily digestible food must be administered. One mistake is to give too much starchy food. While thoroughly cooked starches usually agree, they must not be given in excess. Boiled and fried potatoes had better not be allowed, a well-baked potato being much better. Rare beef or lamb once a day, stale bread or zwieback, plenty of milk guarded with lime-water or barley-water, will afford a diet that will probably not ferment. The skin must always be kept warm and in full action. To this end three grades of flannels may be necessary,—a very warm, thick kind, for winter; a medium weight, for spring and fall; and a thin variety, for the hot days of summer. Drawers, as well as undershirt, should be made of flannel. Great care must be taken always to keep the feet warm and dry. Wet, cold feet are responsible for many attacks of rheumatism and cold.

Children must be provided with rubbers and arctics, and made to wear them. If they are accidentally caught out in a storm and get the feet wet, a reaction should be procured by plunging the feet in hot water immediately upon their return to the house. Children having rheumatic tendencies should never be allowed to go to bed with cold feet. The bed must be thoroughly warmed with a hot bottle or iron. Indeed, this should be done with all children having cold feet. If the skin does not act well with all these precautions, it is well to give the children a hot alkaline bath once or twice a week, followed by brisk friction of the surface with a Turkish towel. A handful of ordinary washing-soda added to the hot bath will render it sufficiently alkaline. There is no doubt that careful hygienic precautions will prevent rheumatism from developing in many children who are predisposed to it.

With reference to treatment during an attack, a physician should always be in full charge, as it is not advisable to take any chances in a disease that may have such a grave result. In cases where one cannot be at once procured, the child may be given a laxative dose of Rochelle salts, and at once be put in a warm bed, and on a milk diet. It is better to occasionally put a child complaining of wandering pains in the limbs to bed, and find afterwards that it was a false alarm, than to allow an insidious attack of rheumatism to be overlooked for some days, during which the patient may be exposed to cold, and great damage result. If a child exhibits a well-marked tendency to rheumatism, or has had one or two attacks, it should be regularly placed in charge of a capable physician, who, by a wise oversight, can do much to ward off attacks.

As all physicians know, many of the diseases of children are self-limited by their very nature, and will get well under any treatment or no treatment, always supposing proper nourishment is given. Rheumatism is not in this category. It can very often be controlled by regular, scientific medical treatment, and by nothing else. By seeking this early, and not listening to hearsay or irregular advice, not a few children will be saved an irreparably damaged heart. Cod liver oil, iron, and a general tonic and sustaining treatment will be indicated after an attack. By enriching the blood, the chances of a future invasion of the disease will be much lessened.—*Babyhood.*

Disused Burial Grounds.—Within the Metropolitan area, says the *City Press*, are about 200 disused burial grounds, which, at a comparatively moderate outlay in labour and expenditure, might be turned into places of recreation. Already the Metropolitan Gardens Association has opened seventy-one spaces which formerly were old burial grounds.

Why is Daily Bathing not more Popular?—Except in very warm weather, the idea of a cold bath is associated in the minds of many people with shivering, numbness, and other unpleasant sensations. The reason is that the cold water is often applied either in an injudicious manner or at the wrong time. Perhaps the most common form of cold bathing is what is called the sponge bath. The bather stands in a cold metal tray containing cold water, while water from a sponge is trickling over him. Such a method of bathing must be more or less chilly and unpleasant. Then a cold bath is sure to be disagreeable if taken when the body is cool. It is not safe to bathe either while in a perspiration or when the body is cooling after perspiration; but, on the other hand, to enjoy a bath properly we should take care that the body is warm. The best, as well as the most convenient, time is immediately on getting out of bed in the morning. If we bathe later in the day, we should allow at least two hours to elapse after a meal, and we should get comfortably warm by exercise (if possible, in the open air) before taking the bath. When this rule is observed, the bathing is followed by a rapid reaction,—a warm glow over the whole frame, and we feel refreshed and strengthened.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

A CURIOUS-FINGERED FAMILY.

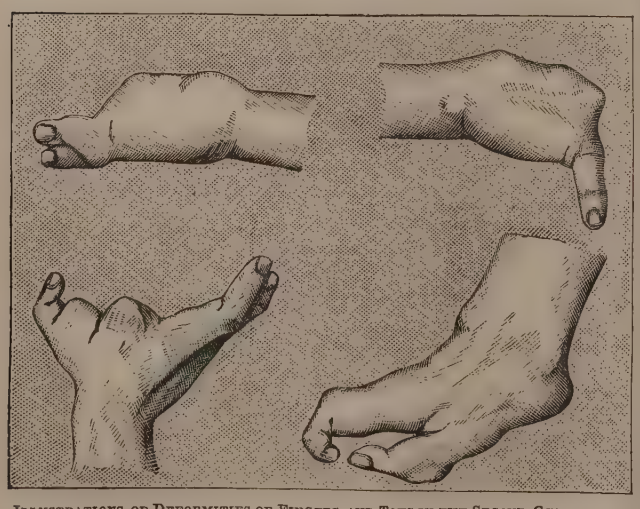
By Dr. Verneau.

Towards the middle of the year 1884 I had the opportunity to observe an entire family afflicted with "heterodactylism," an anomaly which consists in the diminution of the number of the fingers. This case in point presented a double interest. "Heterodactylism" is an anomaly of relatively rare occurrence, and it is still more exceptional to find it transmitted by heredity from one generation to another.

According to Isidore Geoffroy Saint-Hilaire, "heterodactylism" is infinitely rarer than polydactylism (many fingers). It is observed in individuals affected at the same time with other grave monstrosities. In most cases it is met with in individuals who do not possess organs essential to life, such as acephales, or "headless" individuals. In his great work on *L'histoire general et particuliere des anomalies de l'organisation chez l'homme et les animaux*, Geoffroy Saint-Hilaire cites a very small number of cases of simple "heterodactylism"; many subjects had not presented the anomaly but in one limb only.

I have said that the hereditary transmission of this anomalous disposition is quite exceptional. It is sufficient for me to say that the author referred to has not been able to report but one case, and that one borrowed from Dr. Béchet. It is not, then, without interest to preserve the history of the family above noted, which has already transmitted the anomaly for three generations.

In the first generation the condition assumed a special form. The subject showed neither in hands nor feet the bones bearing the nails. The fingers and toes were simply abortive, and of a normal number. Married to a woman exempt from all infirmity, this man was the father of two little girls, who presented the anomaly more marked than himself. They were both born at Saint Laurent, canton of Saint Alvare, in Dordogne, the first in 1848, and the second in 1854.



Illustrations of Deformities of Fingers and Toes in the Second Generation.

Figs. 1 to 4.—The numbers run from the top left-hand corner of the illustration to the right, No. 4 being the figure at the lower right-hand corner.

Elisa Fori, the elder, had only three apparent fingers on each hand, the thumb, the ring, and the little finger. These two last were united the one to the other by integuments, which formed a common envelope. On two sides the metacarpus is complete, so that the anomaly consists in the absence of the index and middle fingers (see fig. 3). Between the thumb and ring fingers there is seen two fleshy buds, which appear to cover the head of the corresponding metacarpals, or palm-bones. This is the state of matters on the left hand, but on the right, on searching under the prominences of skin, we find easily enough the rudiments of the absent fingers. Two rudimentary bones of the index finger are close to the metacarpus, or palm, and are folded in on the side of the palm of the hand. The third joint of this finger is isolated from the others. It is lodged under the pad nearest the thumb, and joined to the inside edge of the first metacarpal bone. The middle finger is represented by only one rudimentary joint, which runs under the skin towards the little finger. Its extremity touches the first joint of the ring finger.

The feet are more incomplete than the hands. They have only the big and little toes (fig. 4), without vestiges of the others. The insteps have only the first and fifth metatarsal bones normally developed, but on each side is found another rudimentary metatarsal bone closely attached on the left to that of the little toe, and on the right to that of the big toe. The intermediate metatarsal, or instep-bones, are completely awanting, so that the fissure runs well up above the joints.

I may add that, thanks to a movement of opposition, Elisa Fori can with the right foot pick up little objects, an action which she cannot perform with the left, although it has a pliant big toe and a little one very slightly developed.

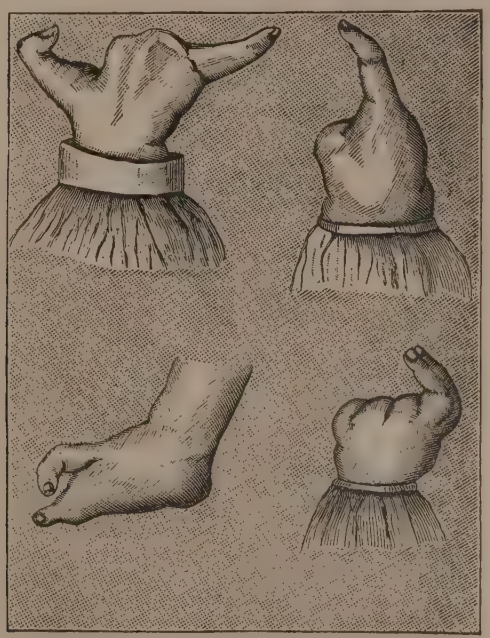
The younger of the two sisters, Marie Fori, has only two fingers on the left hand, the ring and the little fingers, joined together (fig. 1). The right hand, to all appearance, has only the little finger, but in searching closely there is found on this side the vestiges of two joints of the ring finger hidden under the skin. They run inwards towards the little finger, forming with the metacarpal, or palm-bone, nearly a right angle (fig. 2). On both sides the metacarpal, or palm, is reduced to three bones, the two external metacarpal bones being wanting.

The left foot of Marie Fori is exactly the same as the right foot of her elder sister: the large and little toes alone exist, and are opposable. The instep is composed of three bones, the two outside ones being joined together. The right foot is conformed essentially as is its neighbour, but with this difference, that the great toe runs inwards exactly as does the little toe. The result of this disposition is that on the right side there is no movement of opposition. I may add that the fissure between the two toes runs up to the ankle.

Elisa Fori in 1884 was the mother of a little girl called Marie, who had the thumb of the left hand atrophied, or rudimentary, and two other fingers, the ring and little fingers, joined together by skin. The two last-named fingers, also united by skin, are the only ones seen on the right hand. The palm-bones are complete. The feet of this little girl resemble exactly those of the mother, from which they differ only by the presence of two unique

metatarsals, or instep-bones (fig. 7). Marie Fori, sister to Elisa, has had, by her marriage with J. Fabre, three children, Anatalie, born in the month of December, 1874; Clemence, born in 1881; and Delphine, born at the end of the year 1882. All have inherited the malformation of the extremities.

Anatalie Fabre has the hands formed nearly the same as those of her aunt (fig. 5), with this difference, that she has only two apparent fingers, the thumb and the little finger. The ring finger and its palm-bone are entirely absent. The middle finger is represented by rudimentary joints, which run under the skin towards the little finger. The direction of the little finger, and its nearly complete inability, does not permit the child to hold anything between its two fingers, but it can seize small objects,—a pencil, for example,—between its thumb and the second metacarpal. I have seen it do this and fix the pencil



Illustrations of the Deformities in the Third Generation.

Figs. 5 to 8.—The arrangement of the figures is similar to that in the previous illustration, No. 5 being at the upper left-hand corner and No. 8 at the lower right-hand corner.

firmly enough to write. I quote this striking fact also, that when she was not attentively watched, Anatalie Fabre wrote from right to left. In reversing the writing she read it with ease. The feet of this child are exactly like those of her little cousin, Marie Fori. In front of the ankle there are only two metatarsals, or instep-bones, which are connected with two toes, the great and the little one. Clemence Fabre has only one finger on each hand, the little finger (fig. 6) and three metacarpal bones. The feet are the same as those of the two little girls already described.

Finally, the little Delphine Fabre possesses on the left hand the little finger only, and on the right the little finger and the ring finger, united by skin (fig. 8). The two hands have each three palm-bones. Her two feet do not differ from those of her sister, save in the existence of a third instep-bone, which joins the little toe. In spite of the infusion of normal blood at each generation, the anomaly has not any tendency to disappear, a fact easily proved by the following table;—

		Bones Awanting.					
		Hands.		Feet.			
		Palm Bones.	Finger Bones.	Instep Bones.	Toe Bones.	Total.	Average.
1st Generation (Grandfather)	..	..	10	..	10	20	20
2nd Generation	Elisa Fori ..	..	8	5	18	31	37
	Marie Fori ..	4	17	4	18	43	
3rd Generation	Marie Fori ..	..	14	6	18	38	43
	Anatalie Fabre ..	2	12	6	18	38	
	Clemence Fabre	4	22	6	18	50	
	Delphine Fabre	4	19	4	18	45	

We thus note that, whilst the grandfather wanted twenty bones, the children of the second generation, on an average, wanted thirty-seven, and those of the third generation forty-three. Taking the average minimum or maximum, we arrive at the same result: the anomaly tends to accentuate itself more and more.

This case is another instance showing that it is the same with man as with other animals,—an accidental variation tends to propagate itself by heredity. It would be quite possible in the present case, if the same method was employed as that which produces new races of domestic animals (I speak of "selection"), to create an entire race possessing anomalous fingers and toes. It is true that the benefits gathered from the experience of unfortunate cripples are scarcely intended to give enthusiasts the wish to create a new human race. Still one remark more and I conclude. It is known, says Isidore Geoffroy Saint-Hilaire, that no animal presents normally more than five fingers, but that a great number of species have less than five. Thus, amongst quadrupeds and reptiles you often find four, more rarely two or three, and much more seldom only one. In birds there is never normally more than four, nor less than two fingers. The ostrich alone presents this last characteristic. Of these different numbers, not one is met with in man.

One is tempted, when finding human beings offering examples of such variation in structure, to see in these unfortunates some individuals reproducing by *atavism*, or "reversion," an ancestral type more or less remote. Now, there is nothing of this in the family I have studied. In the animal species, when the number of fingers begins to diminish, the thumb first disappears, then the little finger. It is necessary then to explain by means of atavism, or reversion, that those were the two fingers which first disappeared in lower animals. We see in the case just described the inverse result was produced. I have otherwise no wish to place this fact against evolution or transmutation. I know very well that a great number of anomalies observed in man constitute the normal state of such and such animal families. Such is not the case, however, with this family. It is simply a case of hereditary transmission of a state that I may willingly call one of disease, in which atavism, or reversion, plays no part.—*Specially translated from "La Nature" for* Health *by P. H.*

THE NUMBER SEVEN.

Pythagoras, who lived before the days of Seven Dials, pronounced the number to belong especially to sacred things; and we find Hippocrates, four and a half centuries before our era, dividing the ages of man into seven, an arrangement afterward adopted by Shakespeare. But long before this, the Egyptian priests enjoined rest on the seventh day, a *dies infaustus*, though there is little doubt that this ancient institution of a Sabbath was primarily derived from the Chaldeans. There were seven planets in Egyptian astronomy; and hence the seven days of the week, each ruled by and

named after its proper constellation. The ancient Peruvians had a tradition of the deluge from which seven persons saved themselves in a cave, and repeopled the earth; and the old inhabitants of Mexico similarly traced their descent from a like number of persons, each of whom was hidden in a separate cave during the inundation of water.

How this peculiar use of the number spread from the old to the new world it is impossible to say, hopeless to conjecture. Maybe its marvellously frequent employment is a trait of character common to man. At any rate, there are seven holes in a man's head,—two ears, two eyes, two nostrils, and a mouth,—and formerly he was supposed to possess seven pairs of nerves. Such points of likeness are common to the genus. It is noticeable, and certainly singular, that the ancient people of Peru were found to be employing a seven-day week without planetary names for those divisions of time. The ancient Jews consider this number the embodiment of perfection and unity; thus they say the Hebrew letters composing Samuel have the value of seven, this name having been given to him because of the greatness and perfection of his character.

Undoubtedly seven is the sacred number. There are seven days of creation; after seven days' respite the flood came; the years of famine and plenty were in cycles of seven; every seventh day was a Sabbath; every seventh year the Sabbath of rest, after every seven times seven came the jubilee; the feasts of unleavened bread and of tabernacles were observed seven days; the golden candlestick had seven branches; seven priests with seven trumpets surrounded Jericho seven times and seven times on the seventh day; Jacob obtained his wives by servitude of seven years; Samson kept his nuptials seven days, and on the seventh day he put a riddle to his wife, and he was bound with seven green withes, and seven locks of his hair were shaved off; Nebuchadnezzar was seven years a beast; Shadrach and his two companions in misfortune were cast into a furnace heated one seven times more than it was wont. In the New Testament nearly everything occurs by sevens, and at the end of the sacred volume we read of seven churches, seven candlesticks, seven spirits, seven trumpets, seven seals, seven stars, seven thunders, seven vials, seven plagues, seven angels, and a seven-headed monster. Such are merely a few instances of the sacred use of the number, whose employment in this connection seems common to all nations and religions. Not very long ago, in England, the seventh son of a seventh son was reputed to possess singular powers of healing.

Delightful stories of slumberers carry on the same idea. The sleepers of Ephesus are seven; Barbarossa changes his position during his long sleep once every seven years; Olger Dansk stamps his iron mace on the floor once during the same period; Olger Redbeard's sleep is so sound in Sweden that his eyelids lift only once in seven years; Tannhaüser, while riding on his way to the Wartburg, sees Venus before him in all her loveliness, and, getting off his horse, follows her to her cave in the mountains, where he spends seven years in enthralment. Similarly, in Scotland, Thomas of Ercildoune meets a beautiful lady of the elfin race beneath Eildon tree, who leads him underground, where he remains with her for seven years.

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SCARLET FEVER.

One of the most valuable communications regarding scarlet fever, says *Science*, is that from the pen of Dr. Henry B. Baker, secretary of the State Board of Health of Michigan. The arrangements which Dr. Baker has instituted for obtaining information from every town and village of the State are so thorough and complete that the deductions made from the statistics thus obtained are especially valuable and trustworthy.

Dr. Baker does not believe that scarlet fever ever arises *de novo*, but, judging from researches by Dr. Klein and others, thinks it is possible that the pre-existing case may have been a cow or some other animal, and not a human being. There is no doubt in his mind that scarlet fever is a communicable disease; and he gives the following instances, which have come under his own personal observation, tending to prove this communicability:—

(*a*) A child, about four years old, was taken sick with scarlet fever a few days after putting on a cloak made in a room in which was a little girl convalescent from scarlet fever.

(*b*) A young woman came into the (small) residence in which a child was sick with scarlet fever, remained less than an hour, rode several miles into the country, where in a few days she was taken sick with scarlet fever.

(*c*) Members of the family into which was introduced the young woman mentioned above, in a few days were taken sick with scarlet fever, and one of them died.

In reference to the communication of bovine scarlet fever to man, either by contagion or the milk of affected animals, he has no information except that which has already been given relating to the Hendon dairy, of which he says that the evidence of scarlet fever being communicated from diseased milch-cows is given by Mr. Power and Dr. Klein, who traced outbreaks of scarlet fever to milk received from diseased cows on the Hendon farm in England. Milk from these cows was distributed by all the distributers of milk from the Hendon farm except one, and this was the only district supplied by milk from this farm which was not affected with scarlet fever. Dr. Klein obtained from these cows a particular microbe identical with the micrococcus found in persons affected with scarlet fever. Other cows inoculated with the micrococcus from scarlet fever patients became affected with a cutaneous and visceral disease similar to that which affected the Hendon cows. We have already (*Science*, Feb. 10, 1888) referred to the fact that these observations of Power and Klein are disputed by Professor Crookshank, who investigated the matter for the English privy council. Crookshank believes that the disease was cow-pox, and not scarlet fever, and that, as a natural sequence, the outbreak of scarlet fever attributed by Klein to the Hendon cows had no connection with them whatever. In Dr. Baker's opinion, a person who has had scarlet fever is probably liable to communicate the disease to others until after the completion of the process of desquamation (peeling or scaling of the outer skin), which process also occurs to surfaces in the interior of the body, and which, on some external parts *may* not be completed for two or three months. But without bathing, and change of clothing or its thorough disinfection, a person may communicate scarlet fever many months after desquamation has ceased. Cases illustrative of this are recorded on p. 257 of the "Report of the

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SAMPLE TINS GRATIS—through your Grocer or Chemist.

NOT FARINACEOUS. **MELLIN'S FOOD.**

MELLIN'S FOOD for INFANTS and INVALIDS.

An artificial substitute for Mother's Milk for Infants, and a Perfect Food for Invalids. This Food is prepared from the soluble extracts of cereal grains, and, unlike the "Farinaceous Foods," is perfectly **FREE FROM STARCH.** It is a well known physiological fact that starchy substances cannot be digested by young children, the natural food of an infant—Mother's Milk—contains no starch, no provision is made by nature, therefore, in the case of infants for the digestion of that body. The ferments of saliva and pancreatic juice, which later become the actual agents in converting starch into grape sugar, are wanting. MELLIN'S FOOD, being free from starch, and rich in soluble Carbohydrates, Albuminoids, Phosphates, Potash, and other blood salts, forms a perfect food for young children.

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Price 2s. and 3s. per Bottle.

In this preparation Milk is incorporated with the Food in the process of manufacture, thus making it specially suitable where a difficulty exists in procuring fresh cows' milk, as, for instance, on board ship and in hot climates.

Sample and Prospectus on application to the Inventor and Manufacturer,

G. MELLIN, Marlboro' Works, Peckham, S.E.

Michigan State Board of Health for 1885," p. 275 of the report for 1884, and p. 219 of the report for 1886.

Dr. Baker has personally known of instances where articles of clothing, books, &c., have retained infection for a few weeks; but he has known, by means of reliable information, of the infection having been retained for much longer times. For instance, a trustworthy physician informed him that a patient of his, being cold, went to a closet and procured a cape worn by his brother one year before, during convalescence from scarlet fever. In a few days he was himself taken sick with scarlet fever. Dr. Baker thinks that Boards of Health should not require reports of cases of scarlet fever to be made to them unless the people themselves have by law made provision therefore. Nothing is gained by Boards of Health or other servants of the people, attempting to dogmatically force people to do what their intelligence, or lack of it, does not lead them to see is right and just. Boards of Health should strive to put the facts before the people, and to execute existing laws.

The *people* should by law require that prompt report be given to the local health-officer, on the occurrence of a case of scarlet fever. Proper penalty should be affixed to the violation of this law, and the law should be enforced by the prosecuting attorney. The report should be required to be made by every householder, hotel-keeper, keeper of a boarding-house, or tenant, who shall know, or shall be informed by a physician, or shall have reason to believe, that any person in his family, hotel, boarding-house, or premises is taken sick with scarlet fever. The notice should state the name of the person sick, and so designate the house or room in which the person is as to enable the health-officer to enter at once upon his duties of restricting the disease as promptly as the fire department enters upon the restriction of a fire. The penalty should not be enforced against a householder, &c., if the case is at once properly reported by the physician. Every physician should be required to report to the local health-officer every case of scarlet fever which comes under his observation. A fee should be paid by the people to the physician who makes such a report for the public good.

The reasons why notice of scarlet fever should be given are similar to those why public notice of a fire should be promptly given by whoever gains the knowledge first. The common safety of life is endangered by keeping such knowledge secret. No one person's or few persons' interests should be permitted to weigh against the interest of humanity at large.

If the law permits, it is the duty of the Board of Health to act as promptly for the restriction of the disease as the fire department acts for the restriction of a fire, and for similar reasons: life and property are in jeopardy so long as the case is not isolated.

The law should require the health-officer* (*a*) immediately to investigate the subject, and in behalf of the board of health of which he is an executive officer, (*b*) to order the prompt and thorough isolation of those sick or infected with such disease, so long as there is danger of their communicating the disease to other persons; (*c*) to see that no person suffers for lack of nurses or other necessaries because of isolation for the public good; (*d*) to give public notice of infected places by placard on the premises, and otherwise if necessary; (*e*) to promptly notify teachers or superintendents of schools concerning families in which are contagious diseases; (*f*) to supervise funerals of persons dead from scarlet fever; (*g*) to disinfect rooms, clothing, and premises, and all articles likely to be infected, before allowing their use by persons other than those in isolation; (*h*) to keep the president of his own Board of Health, and the secretary of the State Board of Health, constantly informed respecting every outbreak of scarlet fever, and of the facts, so far as the same shall come to his knowledge, respecting sources of danger of any such diseased person or infected article being brought into or taken out of the township, city, or village of which he is the health-officer.

The spread of scarlet fever can generally be prevented by the plan of prompt notification, thorough isolation, and complete disinfection of all infected substances. But when this plan has come into general operation, there is needed a plan for the prevention of the introduction of the disease from without the jurisdiction. Quarantine officers should be required to be as watchful and strict to prevent the introduction of scarlet fever as of small-pox, because the loss of life by scarlet fever is many times greater than by small-pox. For results of perfect and of imperfect compliance with this plan, see the diagram (A) presented herewith; see also "Proceedings of Michigan State Board of Health," Jan., 1887, where it is shown that there was a probable saving of 3,718 lives from this one disease in the first eleven years after the adoption of this plan by the Michigan State Board of Health.

* In cities so large that this work cannot be done by the health-officer, a sufficient number of experts should be employed in this work.

IS LEPROSY INFECTIOUS?

THE *Journal d'Hygiene* says that the discussion upon the contagion of leprosy, before the Academy of Medicine, of Paris, was closed without coming to any definite conclusion. The principal opponents of the theory of contagion declared that the question could not be definitely settled at present, and M. de Bisnier, who argued that it is contagious, "leaves to time the task of hastening the progress of ideas necessary to the definite adoption of his theory."

Among the most pronounced adversaries of the optimism of the London College of Physicians is Archdeacon Wright, of Greatham Rectory, who demands that the Government shall make an inquiry into the number of lepers in England, and advocates compulsory measures of isolation. It is to his efforts that we owe the important document that has just been communicated to the principal political and scientific organs, and which proves that leprosy can be communicated from one individual to another.

Mr. Wright begins by recalling the fact that, before leaving Honolulu, Dr. Arning had obtained permission from the Hawaiian Government to inoculate a perfectly healthy native with leprosy, and the operation was performed, with his own consent, upon a criminal condemned to death. The operation was performed by Dr. Arning, November 5, 1885; and as, since that time, the reports had been very contradictory, Mr. Wright wrote to the English Consul-General at Honolulu to know what had become of the inoculated criminal at the prison of Oahu. Major Wodehouse, accompanied by Dr. Emerson, President of the Board of Hygiene, and by Dr. Kimball, Physician of the Minister of Foreign Affairs, visited the prisoner, and made a most careful and accurate examination, and his report, in which all concur, is that the inoculation had taken effect, and that the prisoner was afflicted with tuberculous leprosy. The importance of a positive fact of this kind cannot be counterbalanced by any number of negative facts. The propagation of leprosy can, then, be effected by inoculation in healthy

tissues of a poisonous element taken from a leper. What remains to be ascertained is the degree of susceptibility of the patient for the more or less rapid development of the disease.

Dr. Roy de Merincourt, while recognizing the value of this experiment, observes that there were predisposing conditions in the case: the man was a Kanaka, living in a leprous country, and had been for three years submitted to the innutritious diet and general discomfort of a prison.

Dr. Henri W. Blanc, of the Charity Hospital of New Orleans, has published forty-two observations of leprous cases, collected during the past five years, which is a striking proof of the increase, slow but constant, of this malady, reaching at present the proportion of 1·7 in 10,000 people. It is known that leprosy has been considered as existing as an endemic in Louisiana. Among these forty-two lepers, twenty-nine were born in Louisiana, and thirteen were Europeans, who had lived here for more than fifteen years.

M. de Blanc believes the disease is communicated by contagion more frequently than through inheritance. He recommends complete and permanent isolation.

The attention of the Russian Government having been called to the spread of leprosy in the Baltic provinces and in St. Petersburg, an inquiry was ordered by the Government, and the report of the committee conducting the investigation was that leprosy, as it exists at present in the capital, presents no danger to the inhabitants, and there is no occasion for any sanitary measures to be taken by the Government.

In Norway, on December 31, 1880, there were 1,760 lepers, 617 of whom were in hospitals; December 31, 1885, there were 1,195 lepers, 524 in the hospitals. From 1881 to 1885 the number of deaths was 704, an annual average of 140. In the seven districts on the western side, from Slavengen to Nordland, the disease is found most frequently. From 1856 to 1885 there were 7,235 lepers, of whom 5,613 have died, 144 have been cured; the remainder are now under treatment.

The conclusion drawn from these reports by the *Journal d'Hygiene* is that really there is no great cause for alarm or need that government should take sanitary measures against leprosy.

How to Extinguish Fire.—An intelligent physician said to me a few days ago, "I think I can give you a good item," and I replied that I was always on the look-out for useful information. He then said that he had studied the subject very carefully, and was convinced that it would be well for every house to keep its own fire extinguisher, and it could be easily done. It would certainly be invaluable to persons living in the country, and far removed even from neighbours. The doctor then told me that he would give me the exact recipe of the solution now used in the fire extinguishers now being offered for sale. Take twenty pounds of common salt and ten pounds of sal ammoniac (muriate of ammonia, to be had of any druggist), and dissolve in seven gallons of water. When dissolved it can be bottled and kept in each room in the house, to be used in an emergency. In case of a fire occurring, one or two bottles should be immediately thrown with force into the burning place so as to break them, and the fire will certainly be extinguished. This is an exceedingly simple process, and certainly worth a trial. We give it, hoping it may prove successful to any who may take the trouble to try it.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

The Place of Saccharin in Pharmacy. — Under this title, Professor Attfield, F.R.S., one of the editors of the *British Pharmacopœia*, gives some very practical information as to the formula and uses of saccharin, in a pamphlet just issued from the press. By way of introduction he observes that saccharin will be of good service in pharmacy in four ways. First, it will give patients an opportunity of taking certain medicines in comparatively small bulk. Many medicinal confections, powders, and lozenges have hitherto necessarily contained large proportions of sugar. A mere trace of saccharin put in place of sugar, while rendering the medicament as sweet as before, will give such a reduction in bulk that, for example, a bismuth lozenge will become a mere pellet, and compound liquorice powder, or confection of senna, be reduced to half their old volume. Secondly, the intensity of the sweetness of saccharin will enable it to mask the nauseous taste of certain medicines, the flavour of cod liver oil, for example being well disguised. Thirdly, patients who are obliged to avoid sugar will no longer be deprived of its property of sweetness, for not only tea, coffee, cocoa, &c., but many medicines also, containing saccharin in place of sugar, will once more become palatable,—sweet, but not harmfully sweet. Fourthly, saccharin not being liable to ferment, while sugar is specially prone to ferment, its use will afford permanent preparations where those made with sugar will frequently spoil. The exhibition of saccharin will present no difficulties. In prescriptions for fluids, such as gargles, mixtures, and emulsions, where physicians would have ordered a given quantity of solution of sugar (syrupus) they will prescribe an equal volume of simple solution of saccharin (sol. sacc. simp.). In prescriptions for a powder, or a confection-like mass, saccharin itself might be prescribed. And most of the large number of galenical preparations, as commonly ordered by physicians, and now made with sugar, would be prepared with saccharin, and would be set forth in prescriptions under distinctive names,—mist. cretæ sacc.; pulv. glycyr. co. sacc. concent.; conf. sennæ sacc. concent.; &c. Concerning incompatibles, saccharin is a tolerably indifferent substance. It is unaffected by the fluids of the body, acid or other, for it has been proved to pass through the system unchanged. Fusion with caustic alkali gives a salicylate, hence prolonged contact with strong alkalies is probably undesirable; and, obviously, acids would precipitate saccharin itself from a strong, though not from a weak, solution of a soluble saccharinate, that is, "soluble saccharin;" but saccharin is quite unaffected by the ordinary materials used in medicine. Professor Attfield regrets the name saccharin, and suggests "neo-saccharin," or an equivalent. He furnishes a considerable number of interesting formulæ.—*British Medical Journal.*

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Prevention of Baldness.—A discussion has recently taken place in the *Popular Science Monthly* regarding the causes of baldness, a subject particularly suitable for discussion in any popular magazine, as it is one that is sure to have for a considerable proportion of readers a direct personal interest. This discussion does not seem to have brought anything new to light, and it was hardly

to be expected that it would. It has for long been a popular belief that tight hats tend to cause baldness, and it is a matter of daily observation that baldness is more common amongst people whose occupations are sedentary than in those whose habits of life take them constantly into the open air. We are not so sure as many people seem to be that the influence of "over-civilization," so often invoked as the *deus ex machinâ* to explain diseases which, for want of more accurate knowledge, it is the fashion to attribute to loss of nerve-power, can be demonstrated to have really much to do with baldness. It is very certain that the affection is favoured by a sedentary life, combined with good feeding, want of exercise, and life in hot rooms, and these conditions are probably more injurious to the continued growth of the hair than the wearing even of tight hats. Although, strictly speaking, there is no reason to believe that baldness is hereditary, yet there is abundant evidence to show that the conditions which favour baldness are hereditary, and prominent amongst these conditions is a liability to seborrhœal conditions of the scalp. Senile baldness may be safely taken to be the expression of the diminished circulatory power in the blood-vessels of the scalp, but baldness before old age is probably always caused by the destruction produced either by specific diseases, or, what is much more common, by seborrhœa or pityriasis capitis. It is the latter fact which it is important for medical men to bear in mind. In seborrhœa or common pityriasis capitis a very great proportion of cases of premature baldness are produced by the pityriasis, the attacks of which are often apparently so slight that they may escape notice. A continuance of branny scales in the hair is certain to be followed by more or less permanent loss of hair. The inflammation of the sebaceous gland is continued in the sheaths of the hair, and the cells which give impetus to the formation of a new hair become weakened or destroyed, and either weak lanugo hair takes the place of the strong hair, or the hair-bulb itself is atrophied. This condition is capable of great amelioration by treatment; and if the treatment is undertaken at a sufficiently early stage, it may, in the great majority of cases, be entirely arrested; whilst the weak anæmic condition which so often underlies the tendency to pityriasis may, in many cases, be largely obviated by insisting on more open-air exercise and general good hygienic conditions. Why women should not be liable to baldness has not been clearly explained. Whatever the cause may be, there is little doubt that it is associated with the conditions of sexual differentiation. Women are much less liable to pityriasis than men are, but even in women a long continuance of seborrhœa of the scalp leads to gradual loss of hair.—*Lancet.*

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Infant Mortality.—The most important of the groups in the Registrar-General's returns is unquestionably infant mortality. It is not only excessively large in most towns, but it is to a great extent made up of deaths from each of the other groups of causes that have been mentioned. It is also the most variable factor in the comparative tables of death-rates, and the differences between the rates of different places are mainly due to its variations. It is also considerably under sanitary control. The experience of the last twenty years shows that the reforms introduced into the sanitary services have lowered this portion of the general death-rate more than any other, notwithstanding the constantly increasing density of urban population. Thus, in the five years 1861-65 the male death-rate under 5 per 1,000 of those living was 74·1. In the five years 1881-85 it was 59·6, a reduction of nearly 15 per 1,000. In the same periods the female infantile death-rate was reduced 14 per 1,000, *i.e.*, from 64·2 to 50·5. The reduction of the mortality in the first year of life is still more striking; in all England in 1875 it was 158, in 1885 it was 138. Yet there is still an enormous difference in these rates,—for instance, between 99 in Dorset, and 158 in Lancashire. But it will be said that there is not much opportunity for sanitary inspection to ameliorate this still terrible massacre of the innocents. The causes are well-known; about one quarter of the deaths under 5 are due to the zymotic class of diseases, the remaining three-fourths mainly to brain diseases, lung diseases, diarrhœa, and tubercular abdominal disease. But, in spite of this tabular statement of the diseases that have brought about so much mortality, we are still ignorant in many cases of its true causes. Thus it has been said, and in a broad sense the statement is undoubtedly true, that children are the most sensitive tests of unsanitary conditions; in other words, the infant mortality is heaviest where these conditions are the worst. But it is very desirable that this charge should be made more specific, and that the several kinds of unsanitary surroundings should each be shown to have its special effect. Is the infant mortality from lung disease mainly due to climatic changes, or is it intensified by foul organic vapours from the grounds of putrefaction, or from emanations from living bodies? Is the increased virulence of such zymotic diseases as scarlet fever, measles, whooping-cough, &c., in the dwellings of the very poor, mainly due to want of proper care and proper food, or may it in some measure be traced to an actual intensification of the poison, due to defective drainage, or to the presence of any organic matter in the air?—*Dr. Ransome, in "Sanitary Record."*

To take rust out of steel, rub the steel with sweet oil; in a day or two rub with finely powdered unslacked lime until the rust all disappears, then oil again, roll in woollen and put in a dry place, especially if it be table cutlery.

To clean carpets, go over them once a week with a broom dipped in hot water, to which a little turpentine has been added. Wring a cloth in the hot water and wipe under pieces of furniture too heavy to be moved.

"Babyhood"—a "Magazine for Mothers" (92 & 93, Fleet-street, London, E.C.)—is a monthly magazine from whose pages we have frequently quoted articles, the quality of which is of the highest class. As a guide to mothers this magazine excels all the periodicals which specially devote themselves to the exposition of the duties of the nursery and home in relation to the upbringing of infants. We cordially commend *Babyhood* to the notice of mothers and nurses.

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "The Editor of Health," 2, PATERNOSTER-SQUARE, LONDON, E.C. Those intended for the Publishing Office to be sent to Mr. A. P. Watt, The Publisher, at the same address.

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HER MAJESTY the QUEEN,
THE ACADÉMIE DE MÉDECINE of Paris and
FORTY MEMBERS of the
ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM *v.* GOUT AND SCIATICA.

Sudbury, Suffolk, 4th February, 1889.

Dear Sir,—With grateful heart I write to inform you that I am now perfectly free from both gout and sciatica, and I certainly was never better in my life. My neighbours and friends are quite astonished to see me running about; as before wearing your Belt I had for a long time past been unable to walk without the aid of two sticks. I consider your treatment a wonderful scientific invention, and I will answer any inquiries.

Faithfully yours, H. CAVE.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM *v.* NEURALGIA.

23, John-street, Rochdale, 2nd February, 1889.

Dear Sir,—My daughter having suffered for three years from this distressing complaint, was advised to try your Galvanic Belt, which she did, and after wearing it for a short time she was completely restored, and has not worn the Belt since. That is nine months ago. Before trying your treatment my daughter was laid up for two years, and was under five doctors, but now she is well and hearty, and I hope by the publishing of this testimonial other sufferers may be persuaded to try your treatment for neuralgia.—Yours very truly, (MRS.) A. SHAW.

Mr. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* SPINAL WEAKNESS AND NERVOUS EXHAUSTION.

81, Brickfield-road S., Everton, Liverpool, 1st February, 1889.

Gentlemen,—I have much pleasure in testifying to the great value of your Combined Bands. For two years I was affected with a weak back or spinal affection, and was induced to try your remedy, and I am glad to say I am now completely restored to strength and vigour. Before I tried your treatment I was unable to walk except by artificial aid. I have never experienced any irritation or discomfort from wearing your appliance, and you are quite at liberty to make use of this communication in any way you may think fit.—Yours gratefully, GEORGE YOUNG.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

Lansdowne, Evesham, 26th January, 1889.

Dear Sir,—I am thankful to say that your Galvanic Belt has been of great service to me, and I never fail to recommend your treatment when I have the opportunity. I wish I could prevail upon more of my friends to try your Belts, for they are most valuable.—Yours faithfully,

H. BURLINGHAM.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

99, Wotton-hill, Gloucester, 14th January, 1889.

Dear Sir,—I am very thankful to say that since wearing your Galvanic Belt I am so much better in my health, that I am a wonder to my friends, and my object in writing now is to ask your advice in another case of nervous weakness.—Yours very gratefully, WM. CROSS.

Mr. Pulvermacher, 194, Regent-street, W.

GALVANISM *v.* NERVOUS EXHAUSTION.

280, George-street, Glasgow, 10th January, 1889.

Dear Sir,—I wish to say that your Galvanic Belt has been thoroughly satisfactory in its action, and has imparted a healthy tone and vigour to my system, and I have no reason to doubt the permanency of the effect. I shall certainly recommend your treatment to my friends, and am yours truly,

D. WYLIE.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM *v.* INDIGESTION and SLEEPLESSNESS.

The Square, Bolsover, Jan. 9th, 1889.

Dear Sir,—I am very happy to say I am now nearly free from indigestion, and I sleep well and have a good appetite. I walked eight miles a few days ago with less fatigue than I walked two before I had your Galvanic Belt. I shall recommend your appliances whenever I have the opportunity.—Yours faithfully, R. A. MARPLES.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

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RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and *not to the Editor.*]

BURNTISLAND.—1. Constipation chiefly, and also local irritation. 2. No need to heed it in the least, if it causes no pain. If there is any discomfort wear a suspensory bandage, and bathe with cold water, to which Hazeline has been added, night and morning.

FAIR HAIR.—If you send stamped addressed envelope, we will forward you recipe such as may suit you, with other advice.

S. P. P.—Superfluous hairs can only be satisfactorily removed by electrical means. Read the article on this subject in HEALTH, No. 149. We can send, if desired, on receipt of stamped addressed envelope, address of a specialist who removes hairs in this way.

MEOPHANS.—Wash the parts regularly with Bayley's Spermaceti Soap, and dust thereon afterwards Woolley's Sanitary Rose Powder.

OLD ONE.—Try the plan of painting the warts every night with tincture of the perchloride of iron, or touch them carefully with aromatic vinegar.

T. COATES.—Take the following:—Carbonate of bismuth, ten grains; bicarbonate of soda, five grains. Mix. One such powder to be taken thrice daily, half an hour before meals.

ELEMENT.—The following is recommended for toothache:—Cocaine hydrochlorate, sixteen grains; powdered opium, sixty-four grains; menthol, sixteen grains; althæa, powdered, forty-eight grains; mucilage of acacia, nine grains. Make into one-half grain pills, and keep in a well-stoppered bottle. For use, one of these is to be inserted in the hollow tooth.

ABATUS.—Apply a little Lanoline Cold Cream each night to the part. If this does not suffice of itself to cure you, then use, once or twice daily, a lotion made by adding one part Hazeline to two parts water, or try the Hazeline pure.

B. E. F.—Take the following pill:—Extract of aloes, eighteen grains; sulphate of quinine, twelve grains; pil. hydrargyri, six grains; extract of rhubarb, eighteen grains. Mix, and make into twelve pills; one to be taken daily about midday.

A. C.—Use a soft brush only, and avoid all hard and small combs. Wash the head once a week with Bayley's Soap and tepid water, and rub into the scalp thereafter a little glycerine of borax, as a remedy for scurf. Keep the hair short. Each morning rub into the roots of the hair with a small piece of sponge a little of the following lotion:—Vinegar of cantharides, half an ounce; eau de Cologne, one ounce; rose water, one ounce. Mix.

NURSE.—To make hair wash powder, take powdered borax, one pound; camphor, one drachm; oil of bergamot, twenty drops. Mix these ingredients thoroughly.

ARK.—For chapped hands use the following:—Glycerine, one ounce; rose water, half an ounce; carbolic acid, ten grains. Mix, and apply night and morning.

S. P. CORDING.—Use the following lotion twice or thrice daily to the parts affected: Bicarbonate of soda, one drachm; glycerine, an ounce and a half. Mix. Give also fifteen drops Fer Bravais, in water, thrice daily, an hour before food, and let us hear how this treatment benefits the case.

NAP.—There is such a specialist in London and Edinburgh. Addresses sent on receipt of stamped addressed envelope.

ALICK.—Use a soft brush only for the hair, and continue the oil you are using. You might, in washing the head, try the effect of using a strong solution of borax in water. Borax ointment (borax one part, simple ointment eight parts) is also a good remedy for scurf. Glycerine of borax might be tried; this latter to be rubbed into the scalp at night.

JOHN R.—Try the effect of a lotion made by adding one part of Friar's Balsam to nine parts of rose water. This is a harmless application.

SABRA.—Give twenty drops Cascara Cordial in water, twice daily, an hour before meals. The food should be of a more generous description than that named, and a little claret with dinner would do good.

F. M.—To remove ink-stains from linen, wet the finger in water, then dip into a powder consisting of one part of finely-powdered oxalic acid mixed with four parts cream tartar, and rub it on the spot gently, keeping it rather moist, and the stain will disappear without injuring the fabric. After the stain disappears wash the linen in pure water.

L. L.—Try the following powder for boils: Sulphide of lime, twenty-four grains; sugar of milk, half an ounce. Take of this powder as much as will cover a sixpence, every four hours. You may find benefit from taking a little claret with your meals. Avoid chills, and take a hot bath twice a week.

ORO.—No treatment is necessary (and you were told so in your last reply) unless such symptoms become too frequent. The diet is to be simple. Avoid all rich foods and stimulants, and take plenty of open-air exercise; use cold sponging each morning; and sleep in a well-ventilated room on a hard mattress.

C. FORMAN.—Press out the pimples as soon as they form; then sponge the skin with Bayley's Eau de Cologne or toilet vinegar. Wash regularly with Bayley's Spermaceti Soap and tepid water, and use brisk friction to the skin with a hard towel. Internally, also, take fifteen drops Fer Bravais after your meals in water, thrice daily. Avoid alcohol, and let your food be largely of vegetable nature for a time.

ELLEN R.—Give the Eau Lodois of the French Hygienic Society, 6, Conduit-street, Regent-street, London. W., a trial. This Society will advise you regarding your hair ailment.

MYOSOTIS.—[If you read our Rules to Correspondents, and comply with Rule 4, we will send you the address you wish. Correspondents would save themselves (and us) much time and trouble by attending to the Rules legibly laid down each week for regulation of the "Letter Box" department of the journal.] Read the pamphlet "A Lecture to Young Men," post free for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C., and follow the advice it gives.

J. H.—In such a case the patient should avoid late suppers, and see that no digestive disturbance exists. What you name may arise from worms. See to this latter point. If there is no definite cause to be found, try the effect of giving twenty grains bromide of potash in water, at bedtime.

P. WAT.—Keep your hair very short for a time; wash it once a week with tepid water and Bayley's Soap; and use the wash recommended to "G. C.," in HEALTH, No. 303.

SPES.—What do you mean by "simple" disease? If non-infecting, there is no danger, of course.

TEDDY BILL.—Try the application of Vinolia (Roberts & Co., 76, New Bond-street, London, W.) to the part. If not cured, write again.

BUNTER'S NERVINE

Cures TOOTHACHE Instantly.

Prevents Decay, Saves Extraction. Sleepless Nights Prevented. Neuralgic Headaches and all Nerve Pains removed.

Dr. ANDREW WILSON, F.R.S.E., &c., writing in *Health*, says: "'BUNTER'S NERVINE' has stood the most severe test. For many years it has been the favourite household Remedy for TOOTHACHE and kindred ailments of NEURALGIC character. It contains nothing of a deleterious nature, and should claim an honoured place in every family medicine chest."

BUNTER'S NERVINE. Sold by all Chemists, 1/1½.

BUNTER'S DENTINE

IS THE MOST SIMPLE AND

PERMANENT STOPPING for DECAYED TEETH.

Any one can easily prepare and place it in the cavity of the Tooth in a soft state, and in a short time it becomes a perfectly hard and white Enamel, forming, as it were, a part of the original substance of the Tooth.

All Chemists, 1/6. *Post Free*, 19 *Stamps, by Proprietor.*

PURILINE Tooth Polish

Will Purify and Beautify the Teeth with a Pearly Whiteness; Polish the Enamel; Destroy Tartar and all Living Germs; and Keep the Mouth in a Delicious Condition of Comfort, Health, Purity, and Fragrance. It is not a Powder or Soft Paste that will scatter over clothing and soil the toilet, but a Dental Paste of stiff consistency, non-gritty, and Absolutely Pure. May be carried in the pocket in any climate of the world, without injury or losing its virtues.

Price 1/- *Sold by Chemists, Perfumers, &c., or sent post free by Proprietor.*

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FOR THE TEETH, GUMS, AND BREATH.

A PURE, PERFECT, AND REFRESHING FLUID DENTIFRICE.

A few drops in water used daily will thoroughly Cleanse, Beautify, and Preserve the Teeth; Polish the Enamel, prevent Tartar, Destroy all living "Animalculæ." It is Absolutely Pure and Harmless to the Youngest child or most delicate constitution.

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UNSWEETENED OR SWEETENED.

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THE CHEAPEST, PUREST, AND MOST NUTRITIOUS

Of ALL similar productions.

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HEALTH says:—"A milk which cannot but commend itself to everyone who can enjoy pure, rich milk."

LONDON OFFICE: 61, MARK-LANE, E.C.

Telegraphic Address—"LAWINSKI, LONDON."

JOHN T. EGGAR.—Take a cupful of milk and a biscuit before you begin active exercise in the morning. Your faintness simply arose from your working too energetically, and from your want of breakfast. You need not be alarmed in the least, as what you name only arises from an empty stomach, together with surface chill from the cold weather.

V. V. V.—You require none of the appliances to which you allude. Simply attend to your diet, according to the rules laid down in the pamphlet published by Mr. Renshaw; and for the rest, take a tepid (not cold) sponge bath in the morning, and continue the Fer Bravais. Sleep on a hard mattress, and avoid fluids and suppers late at night. What you name is of no consequence. Write again in a few weeks, and inform us how you are.

ALMA.—Read the pamphlet recommended to "Myosotis" in the present number, and you will recover by following out its directions.

E. T. SOUTHAM.—Avoid all alcohol for a time, and use night and morning an injection made by adding a teaspoonful of Condy's Fluid to a tumbler of tepid water. Avoid constipation, and take as a tonic fifteen drops Fer Bravais in water, twice daily, after your meals. If not cured, write again.

LORNA DOONE.—1. Let your diet first of all be very light for a time. Give up tea and coffee, and take Scott's Oat Flour to breakfast and supper. White boiled fish may be taken, but little butcher meat, and that mostly in the form of strong soups, made, say, with Brand's Beef Essence. Milk-puddings, cornflour, &c., are also suitable. Eat stale bread only, and continue your claret at dinner. Take, also, a couple of Cascara Tabloids (Burroughs, Wellcome & Co.'s) at night regularly for a time. For the acne, wash with Vinolia Soap, and use Vinolia itself as an application to the face,—to be had from Messrs. Roberts & Co., 76, New Bond-street, London, W. Let us hear result of this treatment. Rest after food must be rigidly attended to. 2. Dahl's Cakes are well known, and have been always recommended by us. 3. The pamphlet you name is that of a quack.

SUFFERER.—Read the pamphlet recommended to "Myosotis" in the present number.

KILLIE. — 1. Use the Soden Mineral Pastilles (advertised in our pages), to be had from all druggists. At bedtime, inhale the vapour of a pint of very hot water to which "Sanitas" Oil has been added. 2. Brush your teeth morning and night with camphorated chalk and tepid water, and avoid suppers late at night.

CATHCART. — If you had perused the pamphlet you read with care, you would have seen that what you name is not a sign of disease, but of health. It is a perfectly natural occurrence, and in your case is not at all over-frequent. You may keep your mind quite easy. Read the pamphlet with more care.

SUFFERER. — Give up tea and coffee altogether, and substitute Scott's Midlothian Oat Flour therefor at night and Van Houten's Cocoa in the morning. Rest after your meals, avoid acid foods, sweets, and cheese, and for the rest, follow advice given to "H. T. R." in last week's number. If not bettered, write again.

H. E.—Certainly not, in boiling with paraffin; but if you mean plain boiling, soda can be safely used.

C. J. (Lanarkshire).—Look well after the child's diet, and avoid fruit, or, indeed, any other foods late at night. Give milk and bread for supper, an hour or so before bedtime. Give Grant's Oat Flour in place of ordinary oatmeal for breakfast, and let the dinners be nutritious, but light,—corn flour, milk-puddings, and like diet, with soups. Brand's Beef Essence should be used occasionally, while five drops of Wyeth's Dialysed Iron may be given as a good tonic twice daily, in water, after meals. Glad to assist again, if necessary.

E. PRYDE. — Give Mellin's Food only. The child is suffering from the starchy food you are now using. This change of diet will cure the case. A hot bath at bedtime occasionally will also do good.

Weakened Energy

Horsford's Acid Phosphate.

THIS preparation supplies the phosphates required for the performance of the several functions of the body, and acts as a nutrient to the cerebral and nervous systems. Its value in the restoration of weakened energy is wonderful. Agreeable to the taste.

Dr. EDWIN B. WOOD, M.R.C.S., and L.R.C.P., Surgery, 123, Holoway Head, Birmingham, says: "I have tried it in extreme nervous debility, with very good results. I speak with great confidence of its good effects, and mean to continue its use."

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ENTIRELY SUPERSEDES

COAL TAR AND CARBOLIC SOAPS.

Is acknowledged to be the most practical and effective soap ever introduced. For Skin Affections and Toilet purposes it is eminently serviceable in producing a clear, smooth, and healthy condition of the skin and complexion.

Boxes of 3 Large Tablets, 1s. 1d., by post from the Sole Maker,

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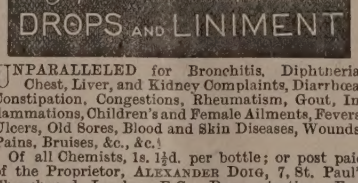
And of all Chemists.



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Scott's Emulsion is not a secret remedy. It contains the stimulating properties of the Hypophosphites and pure Norwegian Cod Liver Oil, the potency of both being largely increased. It is used by Physicians all over the world.

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All Chemists at 2/6 and 4/6.

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"ELECT" COCOA.

The "**Hospital Gazette**" says:—"Among the advantages it possesses may be enumerated "the ease with which it may be prepared, and its agree-"able flavour and **aroma**. In addition to these, it is, "when properly made, hardly thicker "than coffee, thus avoiding the dis-"advantage of some preparations which "are thick and muddy; this is produced "by the **total absence of any thicken-**"**ing matter**. To sum up tersely, we "would say that **everyone should elect** "**to use it.**"

YORK, ENGLAND.

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SPRATT'S PATENT WHOLE MEAL BISCUITS.

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"I have had ample and many opportunities of testing the value for bodily health and vigour of your Whole Meal Biscuits. For children, I find it an almost perfect farinaceous food, containing all the elements of bone, brain, and muscle nourishment. They may be sometimes steeped and soaked with advantage in milk or water; but, eaten as they are sold, they have a very special utility, as teaching and encouraging that most indispensable habit of patient and perfect masticaton and insalivation.

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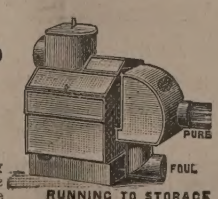

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ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

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